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Answer for question 1,

Brief History of Google

The founders of Google are Larry Page and Sergey Brin. These two guys are the University graduates. In 1995, they meet and shared their opinion and ideas on same issue which is indexing website to produce a better search engine. They started to out their idea which was shared in common in motive of testing it. All they wanted to do is to index websites based on their "back links". If page A is linked to page B, they want both pages to be indexed and identified to enrich the search result. They named their system as BackRub. This BackRub did not give them a big success but it was hot news and well accepted idea among the University students which gave the 2 guys popularity and their test on BackRub was worth.

In 1998, these 2 guys developed their idea on this project and bought a terabyte of disk and set up the server which was their own normal PC in Larry's dorm room. This is remarkable history of Google whereas this PC was Google's first data center. They tried to develop further by calling for investors such as Yahoo! founder David Filo. But Filo did not be an investor but just suggested them to develop by themselves. The others did not show their interest on this project. And these 2 young guys decided to move by their own. For this, they out put a well defined project paper. This project paper reached Andy Bechtolsheim, one of the founders of Sun Microsystems who spared his time to view the demo of their project. He agreed that it is a potential project and released 100,000 US Dollars cheque on name "Google Inc." which did not exist yet. The 2 young guys worked out hard to incorporate Google Inc. and called for investment from friends, family members and acquaintances. They managed to come up with investment of almost 1 million US dollars.

The Google Inc. opened their office at Menlo Park, California on September 1998. Craig Silverstein is the first employee hired by Google Inc., who is now Google's director of technology. Their system Google Beta already hit to near 10,000 of searched per day. This new born search engine was highlighted in USA Today. And in December, PC Magazine ranked Google.com as one of top 100 search engine. This hot news gain publicity for Google to grow few steps further drastically.

In 1999, they company had another brilliant chance to enhance their search engine and call for more users by working together with AOL and Netscape. They selected Google.com as their primary search engine for their browsers and internet users. This gave Google.com near to 3 millions of searches using their search engine. On 21st September 1999, the "beta" label came off the website. Now the search engine is not a testing and it is not a baby to the market. Removing the "beta" label showed a good remark that Google.com is growing now.

From that day until now, Google is trying to introduce a lot of new features and services to their users. The most remarkable service which recently alerted Internet users all over the world is the "Google Earth" which represents Google's Map technology through satellite picture. Google had used this new feature to gain their revenue too. Google is getting too much into non-stop innovations. They converted each and every of their free services into company's revenue. Google marked its revenue of 805.9 million dollars in October 2004. The company is growing rapidly with their own headquarters in California City. And yet the interesting part is, until today

they are still facing a lot of law suit against their company from varies firms. Google struggles and strike out all these with their very strong capital and dedicated work force. One of the most familiar law suit against their company is the AdWord advertiser fraud for invalid clicks which will be discussed further on 'services' section of this report.

Services offered by Google.com

Services which provided by Google.com is mainly provided for free to internet users while they are generating revenue from the free users itself. Among the popular service that they offer are:

Google Search Engine, from the beginning of this report, we are talking bout Google who hit the market for their unique website search engine service. All they do is use their own web crawler or spider to identify any website available online and index it into their service. This promises very fast search time and more relevant search result.

Google Group, this is a name for a discussion space which relating to those members who had joined the group. There are a lot of groups available in the Google Groups which we can choose and join for free. This is similar to the service which is well known as "Usenet", a space for internet users to discuss around. This service was well accepted and used mostly by Europeans rather than Asians.

Google Images, this is yet another name for Google Image Search Engine. The Google innovative team had come out with image search rather than the classic text search which bores most of us. Let's assume that we want to search for wallpapers to place in our desktop, rather than search for text 'wallpaper' and click the search result one by one search for the best one, we can simply use Google Images to search for it. Example is "cartoon wallpaper" and the result will first of all display a small thumbnail image which suit to criteria 'cartoon' and 'wallpapers'. Google made the user's life simple. This Image search engine idea was adopted by Yahoo! which are Google's main competitor in search engine industry.

Google Videos, this service is just another name for Video Clips Search Engine. This was not original idea of Google. But it was the idea of Yahoo!. Once Google came out with Image Search, Yahoo! adopted the idea and gets one step ahead by developing new service called as Video search which was then adopted by Google. Anyhow, this service isn't popular compare to Yahoo! whereas Yahoo! Video search is being best.

Google's Email service, this is 100% free email service hosted by Google on their servers. They named this email service as Gmail. Gmail was launched firstly as beta which comes with 1 gigabytes of email storage space which was direct fight to Yahoo! Email which was only providing 5 megabytes of storage. Gmal Beta was not open to public yet firstly when they launched. This is due to their new script testing. They invited almost 100,000 users to test their email service. And these 100,000 members can invite other new members to join Gmail which will probably be their friends and family members. When Yahoo! noticed this, they immediately announced 100 megabytes of storage for Yahoo! Worldwide while Yahoo! China users was given 1 gigabytes. Finally when most of the Gmail beta users voted Gmail as best free Email service and Google Inc. was confident with their script. Then Gmail is now open for public to register. And Yahoo! Email gave 1 gigabytes to all their users to stop their email users from migrating to

Gmail. But Google guys are the most innovative people and they know how to attract users from Yahoo!. Gmail is now giving more than 2.7 gigabytes (as I check on 20 December 2006) and it is rapidly growing. No one can figure out why is the Google Email storage is growing every day, every hour, every minute, and even every second. The truth is here : www.gmail.com. You can login to that website and see the text in last line of the page. Believe it or not is up to you but it is growing. The storage size is not static or fixed. Gmail made all email user amused and fall in love with their email service. Even myself, my primary email was regan87@hotmail.com but now it is reganrajan@gmail.com. Another biggest competitive advantage for this Gmail is that, there is no other free email provider giving free POP email, Post Office Protocal. It made our life simple again, we no need to go to website and login and see our emails. We can get our email downloaded to our hard disk using Outlook express or other client with just a click away. Gmail is the evolution to new revolution. Definitely they will be primary choice for free email in future for those internet newbie.

Google Froogle is the name created by Google team for their new informative shopping space. Slightly similar to E-commerce website which will recall many reseller's product information and put it in one place as result to our search. Example, if you want to buy MP3 player, all you need to do is go to Froogle and search for "MP3 Player" and the result will come out with picture and price of the product from more than one seller. So we can choose the best teller and do the trade.

Google News is nothing much new else than the classic online News service which is already in place at Yahoo! and MSN. The new thing here is, this news is collect from more than one source. Some of them are from CNN.com and other popular News provider which promises you to be up to date on latest issue with just a button click.

Google Earth is their service name for satellite image service. This service works on simple manner and complex manner. The simple manner is where the users are allowed to download Google Earth software and they can explore the globe more virtually and it is the true picture capture through satellite. The user can zoom and focus on certain area and locate the route. They even can check out for highway route before they start their travel for the day. The complex manner of this Google Earth is, they can identify a complex location. For example, if you are looking for McDonald to go for dinner, just go to Google Maps and type there McDonald. The result will come out with all location for McDonald and their absolute location in Map can be viewed immediately. This is a very complex system which telling you almost each and every shop and place located around you. This system was developed focusing on USA and Europeans only. Not yet too complex version for Asians. The best part of this is that, Google never let other's die. Google will always try to benefit each and every one of us through their new innovations. Similar applies for Google Earth which was integrated with API, Application Programming Interface. This API can be used by all programmers absolutely for free to develop their own application using Google Earth's advantage to locate an absolute location.

Google Desktop search, this is an application programmed by google and distributed as free service. This application will mainly work on your local hard disk. It will index all your documents and save it in local hard disk. Later when you want to search for a file on your local hard disk, you can simply one Google Desktop search and search for it. I have personally

experienced this service. This is an excellent application. It will not only index our documents, but it will do more by indexing the images, video clips, and emails which are stored in hard disk through Outlook or outlook express. The accuracy is 100% better than Microsoft's Search application which comes together with Microsoft Windows. Lack of Microsoft on programming a powerful search tool caused Google to take advantage.

Google Adword, innovative name for innovative advertisement method. This service giving the advertiser an opportunity for them to advertise in Google's website or in any other Google's associate website to get high traffic and potential customers. Explained more in detail at next section.

Google Adsense, is service opened to webmasters and web developers. They can use Adsense service to place the Adword advertisement in webmaster's website and gain a reasonable profit out of it. The profit is distributed based on pay per click method which is very profitable and reasonable for both advertiser and webmasters. Google has a very strict policy and rules to provide this service to webmaster to protect the advertiser from being cheated for invalid clicks which putting the advertiser into unreasonable liability.

The other available services are Google Talk, Google Directory, Google Blog, Google Catalog, Picasa and many more. They are not stopping their services list even recently they added a new service to Search Patents based on US Patents text. The list of services will never stop until Google innovation teams never stop thinking for new ideas and services.

Google's main source of income

Interesting part, how does this Internet search engine giant makes money although they are giving most of their services for free? The only answer for this is, they get the money from advertisement. Google's advertisement service is called as "Adword". The merchants only need to register and put their keywords and their website URL. Google stores their keywords into their database and when an internet user searched for similar keyword, the advertisement will be displayed on the search result page. The advertisers no need to pay a fixed amount for their advertisement to be displayed, but they just need to pay only for those clicks on their advertisement. This means if 100 people saw your advertisement and no one clicked then you no need to pay any penny. Payment from advertisers itself had gained Google billion of dollars based on their latest announcement. But, Google's website only handling with millions of searches per day and how could they ever makes billions from advertisers? Here is where their original business model is revealed.

Google.com not only displays advertisement on their website but they also make it visible on their associated website. This is done through another service called as Adsense. Those website which are registered to Adsense are highly associated with Google's advertisements. Google take advertisement from Adword and display it on Adsense member websites. There are millions of Adsense members registered and millions of users are clicking to their websites perday. So here, the word millions is being multiplied by another millions. This is billions of advertisement display per day and it is logic to make profit for billions is possible for the Google. These Adsense members also get a proportion of the advertisement revenue as their commissions for displaying the ads on behave of Google. So here, Google ignores no one and treats all in fair

way to share the revenue and make a bigger profit from the bigger advertisement network that it has.

Talking about their profits, it is also to mention about some of their expenses which they handle smart to cut out the cost. I got this information based on website: news.zdnet.com. Google had extremely cut down their cost in maintaining their server applications license by not using Microsoft platform but they all are running under Linux Red Hat distribution with open source license and modified the kernel for Google platform. This is free license operating system and cut down millions of Google's expenses on platform licensing issue.

Google survived in the competition and crisis faced

Google not survived yet from this competitive E-commerce world and they are still struggling to win through the competitions. Their rivals are Yahoo! and MSN which is now renamed with new branding as Windows Live. The first problem that Google faced was in 1998 when their first version of search engine with name "BackRub" gets the popularity but they could not expand further on their new idea as the founders faced financial difficulty to maintain this website. This was remarkable black history of Google. This innovation brilliant search engine idea was almost collapse in 1998 when the founders faced this problem. But the founders were confident with their idea and incorporated Google Inc. with initial investment of almost 1 million dollars while 100,000 dollar was given by Andy Bechtolsheim, one of the founders of Sun Microsystems. The fund given by Andy Bechtolsheim was remarked as "Touched by an angel" (exact phrase from: http://www.google.com/corporate/history.html).

They managed to come up in 1998 after struggling with finance issue. That is not the end. Until today the Google team is trying to beat their rival's services by producing more innovative services from Google. The rain will never stop as this competition will never stop. The clear picture of competition exists between Yahoo! and Google. I would like to highlight some of the competitions. When Google launched Images search service, Yahoo! also release the same feature. Google Image search is being primary search for internet users because Google did not index private photos much while Yahoo! images indexes mainly photos which was captured by someone else. For example, if you go to Google image and search "Christmas", you will able to see the santa claus face first. While in Yahoo! images, you will able to see someone's Christmas photo albums which is not what we was looking for.

When Yahoo! released Video search service, Google also immediately released Video search service. In here, Google lost the competition as Yahoo! Video search is being primary for video searches online because Google do not index many videos. Yahoo! Videos have 10 times more video indexed rather Google.

Google announced Gmail with 1 gigabyte and Yahoo! also announced 1 gigabyte. But Google is the one win the competition because provides more than 2.7 gigabytes and free POP email access.

Yahoo! Messenger versus Google Talk. Google Talk was developed using Jabber technology. This Jabber technology open the Instant Messaging service to be provided more than one application. This means, when Gmail users download Google Talk and using it, they still can add users of Jabber side who are not related with Google or Gmail at all. You can even talk to

other platform users. This technology similar to VOIP which are widely available now days. When Yahoo! became alert of this Google Talk using open technology of Jabber. Yahoo! Messenger immediately coupled with MSN Messenger. When I got to know that Yahoo! Messenger and MSN Messenger is marrying, I slightly smile and this clearly shows MSN and Yahoo! are now scared of Google. But the marriage of these MSN with Yahoo! Messenger won't effect the growth of Google Talk technology because most of the VOIP providers such as Skype is implementing Jabber into their system. By this, Skype will be coupled with Google Talk and many other VOIP can join in the team to give 100% free voice over the internet protocol.

Besides these competitors, there are also other people striking against Google. The simple example is the Copyright Authority Commission always keeps on filling law suit against Google. This is because, when Google crawls a website and index the picture, they not only do indexing but they also save a small thumbnail of the picture into their own server to ensure web visitors will be able to view the thumbnail of the picture in the image search result page. Creating thumbnail using others pictures which might be an unlawful act because the media is copyrighted and protected by the law. Google will facing the law suit and entitled to pay certain fund for misuse of copyright. For this, Google need to be very careful and concern in their crawling system.

Else than Copyright Commission, the Google's advertiser themselves had filed many law suit against Google claiming that Google is charging them to pay for invalid click for advertisement. Invalid clicks means, the internet users will be encouraged to click the advertisement by the webmaster for an incentive. I had come across many website that doing like this; they request their website to donate at least one click on the Google advertisement. This is because our one clicks worth for commission around 5cents to 20cents. I know this amount roughly because I am used to Google's Adsense as I have promote it in my website. Even my name, Regan Rajan is one of Google Adsense Blacklisted webmasters because I have also tried to promote the Google Adsense for incentive clicks. Google spotted me, but they could not spot all other intelligent webmasters out there. And recently middle of 2006, Google announced that they will refund for about 10% of their solid revenue on 'Paid Per Click' advertisement to pay back the invalid click claims.

Reference:
1. http://www.google.com/corporate/history.html
2. http://news.zdnet.com/2100-9588_22-5596811-2.html
3. http://www.fastcompany.com/magazine/69/google.html
4. http://www.google.com/apis/maps/
5. http://en.wikipedia.org/wiki/Google
6. http://en.wikipedia.org/wiki/History_of_Google
7. http://en.wikipedia.org/wiki/IPO
8. http://www.google.com/corporate/execs.html#larry
9. http://www.google.com/intl/en/options/

Word Count: 3,411 words

Answer for question 2

"Information technology is changing the way we do business"

Do you agree the statement?

I strongly agree to the statement based on my point of views and opinions. Business which was very profiting did not profit the same amount today. Everything is changing, including the business and the way we doing business. Information technology is just a medium for enhancing business peoples to incorporate a better business style. This is because each any every business steps are involved with Information Technology. Starting from the business bank account itself related to IT. We need to have a proper tracking of our expenses and incomes. For this we use IT as an interactive media to record our transaction. Even the bankers now days already implemented their Online Banking service and well accepted by public. The public is now able to pay you online through your bank account. They are given much simpler option to transfer an amount of money from their account into your business account. For this, we must make sure our IT knowledge and infrastructure is stable. Besides that, previously every one prefers to walk into a shop and purchase a product. But now, revolution had arrived, most of us just prefer to pay online for the product and receive it to our door step.

Not only the online purchasing had made the changes but also many other things caused our business way to be different due to IT changes. The other factor is our competitors themselves. Our competitor always tries to win our product market. Therefore they will always be the first to steal our customers by promising them a better service and a convenient was of trading. This indirectly forces our business to upgrade IT infrastructure in purpose of retaining customers. Therefore, besides having a shop, we also need to have an e-commerce website which will allow our customers to purchase and pay online. This ensures they are comfortable doing business with us.

Else than e-commerce factor, we can also mention that IT had made our work simple and keep us close tight to our customers whereas we can store customer's information into our database and we can constantly follow up with our customers which will make them happy and always select to do business with us again. IT helps our business in various ways. With a prefect IT infrastructure in place, we can always send greeting card to our customers and make them happy and tell me that our business cares for customer's happiness. These types of IT infrastructure already exist in many companies. It is a basic requirement for the firm to have an up to date IT system to ensure the business doesn't loss any pennies in the future.

E-Commerce does not worth

I could not accept the statement. E-commerce is the next era of business revolution. Many companies are getting into E-commerce because they are realizing of this new business modal which will succeed. Effectiveness of E-commerce fully depends on how it was implemented in the first place. An E-commerce website should not be just a website, it should be trusted and reliable so our customers will trust on our E-commerce security and continue to trade with us. Many threats exist forward implementing this sort of E-commerce business model

because it is well known that there is no such thing as 100% safe. Definitely have many disadvantages and risks in this E-commerce for both company and customer.

We start discussing from the customer side of threats. First of all, most of internet users are worried about the internet security. When a customer transfers their information such as Credit Card number and password through our website, they will first consider how trustable our website is for them. Our customer's private information such as their password and pin codes should be encrypted to ensure the data being transferred through our website is safe from hackers. Next is the reliability of our service should be visible clearly to customers. This is because many internet frauds exist. The example is, a person might develop a website because it only cost around Rm500 to develop a website. Them he will put product images for sales. When a potential customer clicks to the website, and once they paid for the product, assuming the product price is RM2000. The seller will be gone missing and the next day when they suppose the delivery the product, the whole website will be inactive. Whereas the seller had gone away with the money we transacted to him. This fraud act already profited him around RM1500 which is one month salary of programmer. The main issue for customers to use our E-commerce website is the security issue.

On our business side, we need to look first from implementing an E-commerce website. This will roughly cost around RM3000 for a well designed E-commerce website. This is not enough. We have just opened the E-commerce website, next we need to target users to our website. Otherwise no one will be trading through our E-commerce website and our investment of RM3000 won't be worth at all. When we analyze on how to target visitors to our website, we will only have one option which is to advertise our website to increase its popularity and ensures we will increase hits to our E-commerce website. This advertisement can be done through advertising our selves or using online media. If we advertise our selves, we can print the website URL in our name cards and letterheads and so on which is directly distributed from us. On the other hand, if we choose to advertise online, we will need to choose a good reliable advertiser such as Google or Yahoo! and they will promote our website for us. But here we need to pay high. If our business is focusing on local peoples, advertising through online won't be much effective because internet is an open media which will promote our website to worldwide visitors. If they clicked our advertisement and did not purchase anything, then we will still be liable to pay to the advertisers. And there is also another method of advertisement which only requests you to pay for advertisement once the visitor purchased any product from us. But this also won't be effective as we target on local sales. Promoting and advertising ensures better sales and profit from our new E-commerce website. Or otherwise, as the question title says, there won't be any benefit of doing E-commerce website.

The best reason to encourage E-commerce is because this new style of trading makes the transaction faster and more convenient which is preferred by most customers. Furthermore, this is the future of trading. We need to get into E-commerce business to ensure that we don't loss our customers to our competitors due to lack of E-commerce website.

Word count: 1,126 words

Soft Copy of this assignment,